05-30-10_Brooks McCall_Status Report
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- Before leaving Port Fourchon around 2000h on May 29 the vessel was equipped with improved internet access, which caused several problems with communication. Access was intermittent but improved for the most part. The satellite phone number changed to 337-761-9822.

- A new sampling design to replace 10 bottles at different depths on each cast with duplicate bottles at five depths was implemented. This design accommodates microbiology-omics sample volume needs for the Berkeley group. Chemistry samples will be taken from odd CTD bottle numbers (1,3,5,7,9) and biology from even numbers (2,4,6,8,10). Bottle eleven is an extra and twelve is a surface bucket sample.

- The first station occupied (BM53), was 1542 m WSW from the well head (spill source), and was last visited on 5/23/10 as station B44. Sampling could not begin at the benchmark station due to oil skimmers in the area, but it was sampled after BM53. Fluorescence signals reported were the highest observed to date(35-40 mg/m*3, at approx 1200 m depth, DO approached 3 mg/L around 500 m. Surface conditions at all three stations included heavily oiled surface water and noxious fumes.

- As noted above, the second station was the benchmark station, (last occupied as station OV11) designated BM54. Fluorescence signals were observed at the 40 mg/m*3 intensity, but the range of depths where this intensity was observed was not as wide.

- The third and final station visited today (BM55) was 1.5Km due west of the spill site, and had not been visited before on this series of cruises. No fluorescence peak was detected, although there was surface sheen. This site/heading was chosen because it had not been sampled before and it was in the general direction of reported fish mortality observed by researchers aboard the Walton Smith.

- The fluorescence data from today's samples at stations B53 and B54 clearly indicate the presence of a dispersed oil plume travelling from the source in a WSW direction from the well-head.

- Fluorescence data observed today at the southwesterly stations was considerably higher than for recent, previous cruises. This may be due to relatively continuous dispersant injection over the last three days, and cessation of the top kill effort.

- Overall, these results reinforce models describing a generally southwesterly direction for the plume, typically between depths of 1000m and 1300m.

- Tomorrow's sampling efforts will be directed towards tracking the presence of dispersed oil in this direction, but further away from the source.

- Samples were selected for toxicity bioassay using the Rototox test. Using real–time feedback for fluorescence and the auto fire capability of the sampling array, samples were selected for assay which corresponded to the deep water fluorescent peaks from station BM53. Three such samples were selected for testing, from 1050m, 1200m and 1050m, together with a surface sample and an apparently clean sample from 600m. Results of these tests will not be available until Tuesday 5/25.

- Dissolved oxygen analyses for this cruise are limited to those obtained from the Seabird probe on the CTD, due to lack of a laboratory DO meter, and the uncertain accuracy and high variability of the LaMotte 5860 Field Kit. A replacement laboratory DO meter has been ordered, and should be available for the next cruise. We remain confident in the CTD DO probe due to strong correlation with laboratory data during previous cruises.

- A summary of particulate analyses (LISST) is shown in attachment 05-30-2010_Brooks McCall_LISST. Data continue to show generally good correlation with fluorescence peaks.